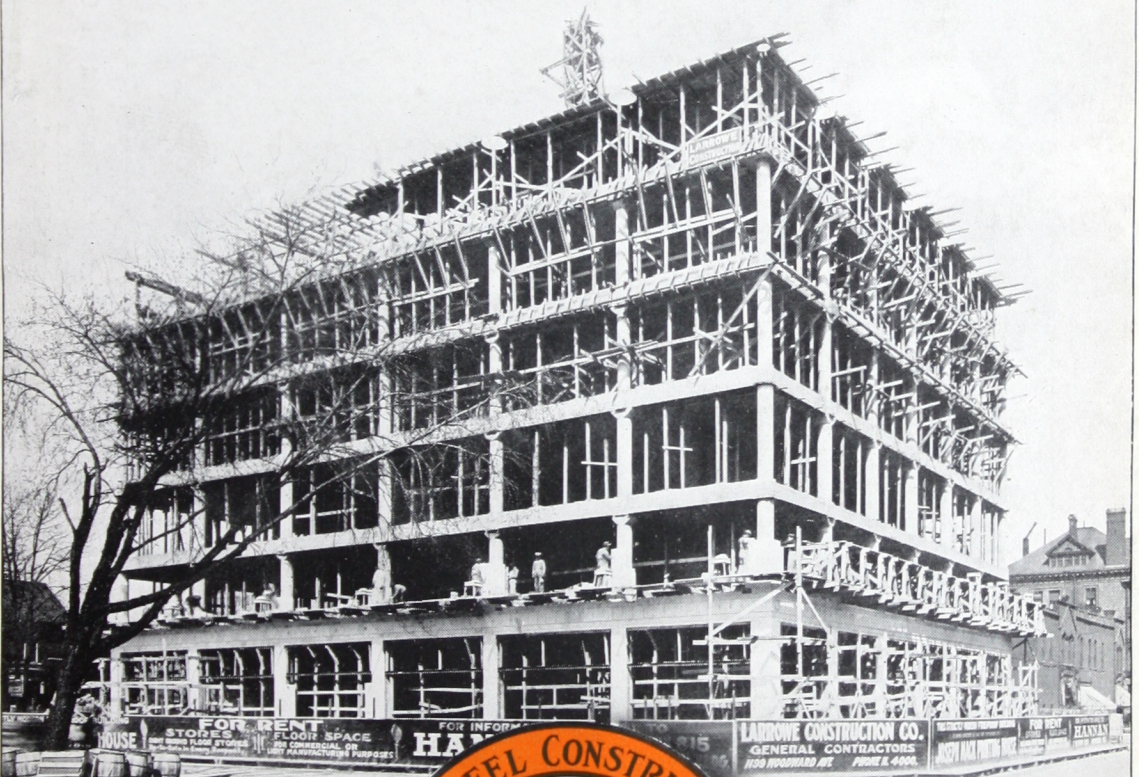
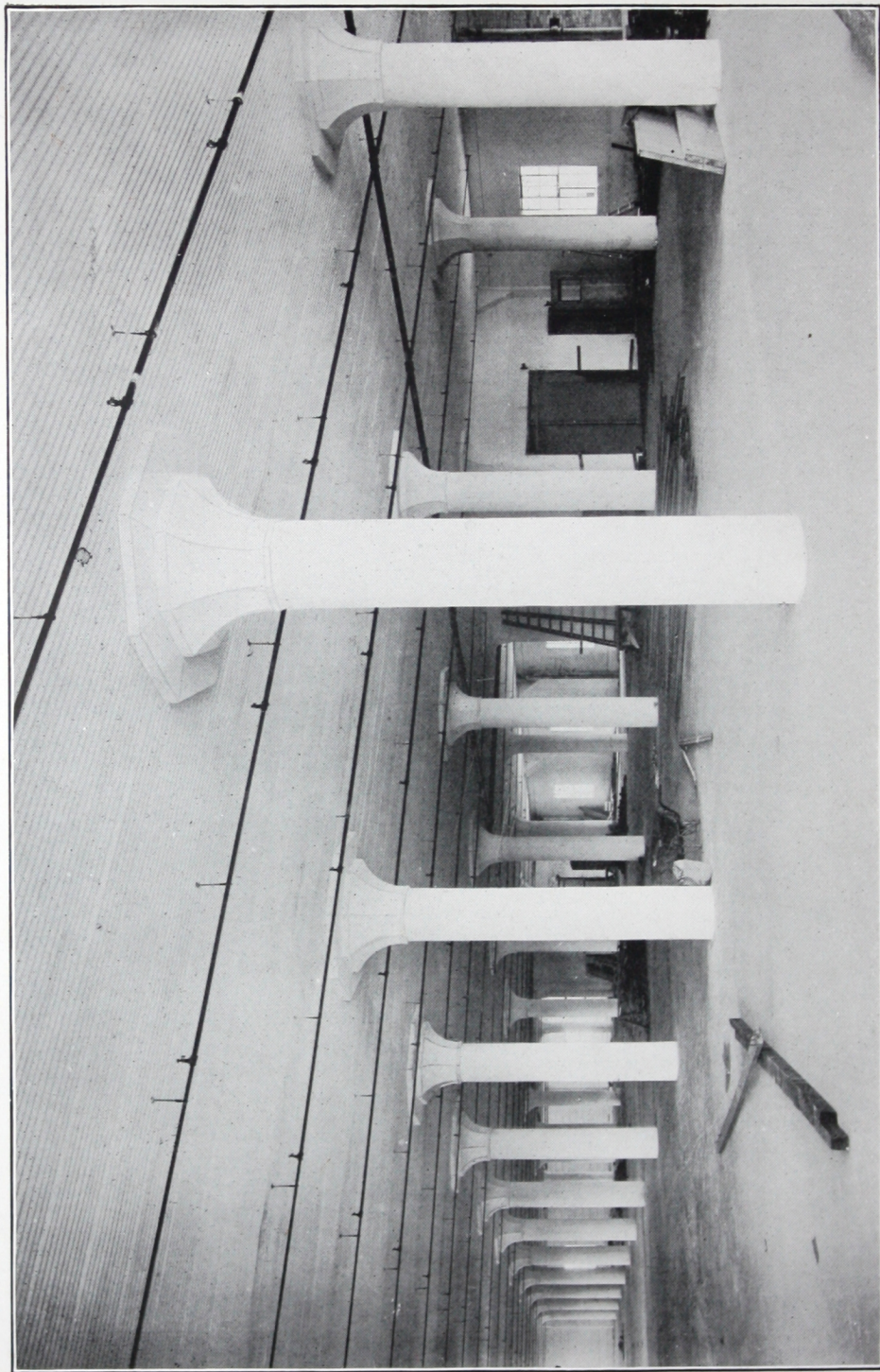


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# Blaw Adjustable Column Molds & Column Heads





Interior of Morgan & Wright Building, Detroit. Ferro Concrete Construction Co., Cincinnati, Contractors. Kahn & Wilby, Detroit, Architects. Blaw Adjustable Octagonal Column Head Molds and Adjustable Circular Column Shank Molds used.

# Blaw Steel Construction Company

General Offices, Pittsburgh

New York Office  
165 Broadway

Works  
Hoboken, Pa.

Chicago Office  
Peoples Gas Bldg.

Designers and Builders of Steel Forms for every Type of  
Concrete Construction

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## The Blaw System—Used on 10,000 Contracts

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**I**N this bulletin, you will find described Blaw Adjustable Steel Molds of Circular and Rectangular Cross-section for Reinforced Concrete Columns and for Column Heads or Capitals of Standard Profiles. The illustrations show a few of the many jobs on which Blaw Adjustable Column Molds have materially reduced the form cost of concrete construction.

We lease Blaw Column Molds and Heads on such reasonable terms that contractors find the Blaw System to be the most economical method of handling this kind of work. Where the job is large enough to justify a sub-contract, we not only lease column molds, but handle the erection and dismantling as well. Thus the contractor is relieved of all work in connection with them.

The Blaw Steel Construction Company is the pioneer, as well as the recognized leading manufacturer of steel forms for every type of concrete construction. Blawforms have been used on over 10,000 contracts. From the wealth of data and information gained through the successful execution of these contracts, we can offer suggestions that will save money for you.

We desire to call the contractors' attention to the fact that we also lease Wall Forms for all the systems of concrete construction now in use.

A great many of the most reputable and successful contractors in the country have saved money by consulting us and using Blaw Steel Forms. We should like the opportunity to submit a proposition to you on any job upon which you may be figuring.

### **Circular Columns Cheaper.**

Circular columns are both better and cheaper than columns of other sections. If spiral reinforcing is used, as the best practice demands, the concrete within the spiral may be subjected to greater pressure, and the columns made smaller in cross section than otherwise. Not only are less materials required in circular columns than in those of other sections, but also the forms are cheaper—very much cheaper if Blaw adjustable circular column molds are used. This is true of columns, no matter what kind of a floor system they support, be it flat slab, beam and girder, concrete rib, or any other. It is always more economical to make interior columns of circular section.

The common practice is to make wall columns rectangular, even though they cost somewhat more, because of greater convenience in making connection between these columns and the building walls.



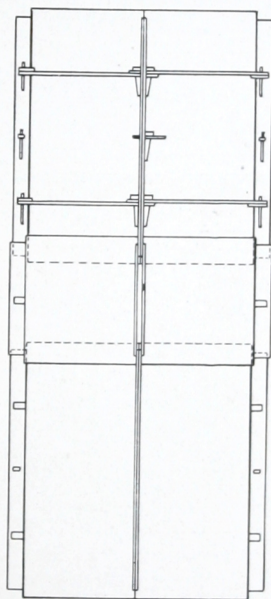
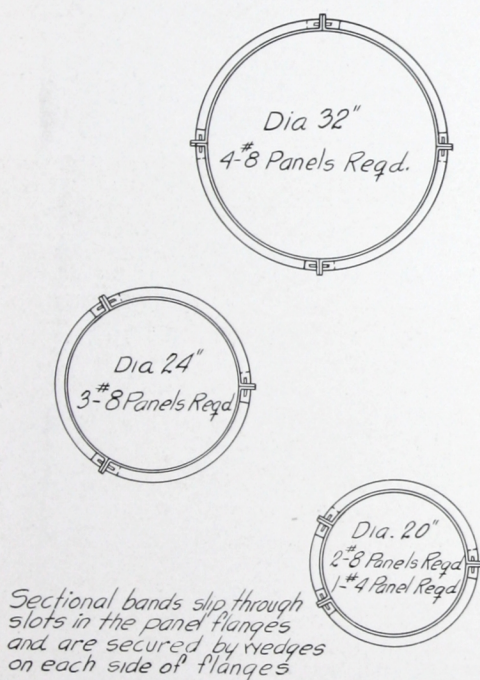
Interior Columns in building for Schultze Baking Company, McLennan Construction Company, Chicago, Contractors.  
Blaw Steel Column Molds used.

# Blaw Circular Column Molds.

**M**ETAL is so much better a material than wood for making circular column molds, that wooden molds need not be considered at all with reference to this class of construction.

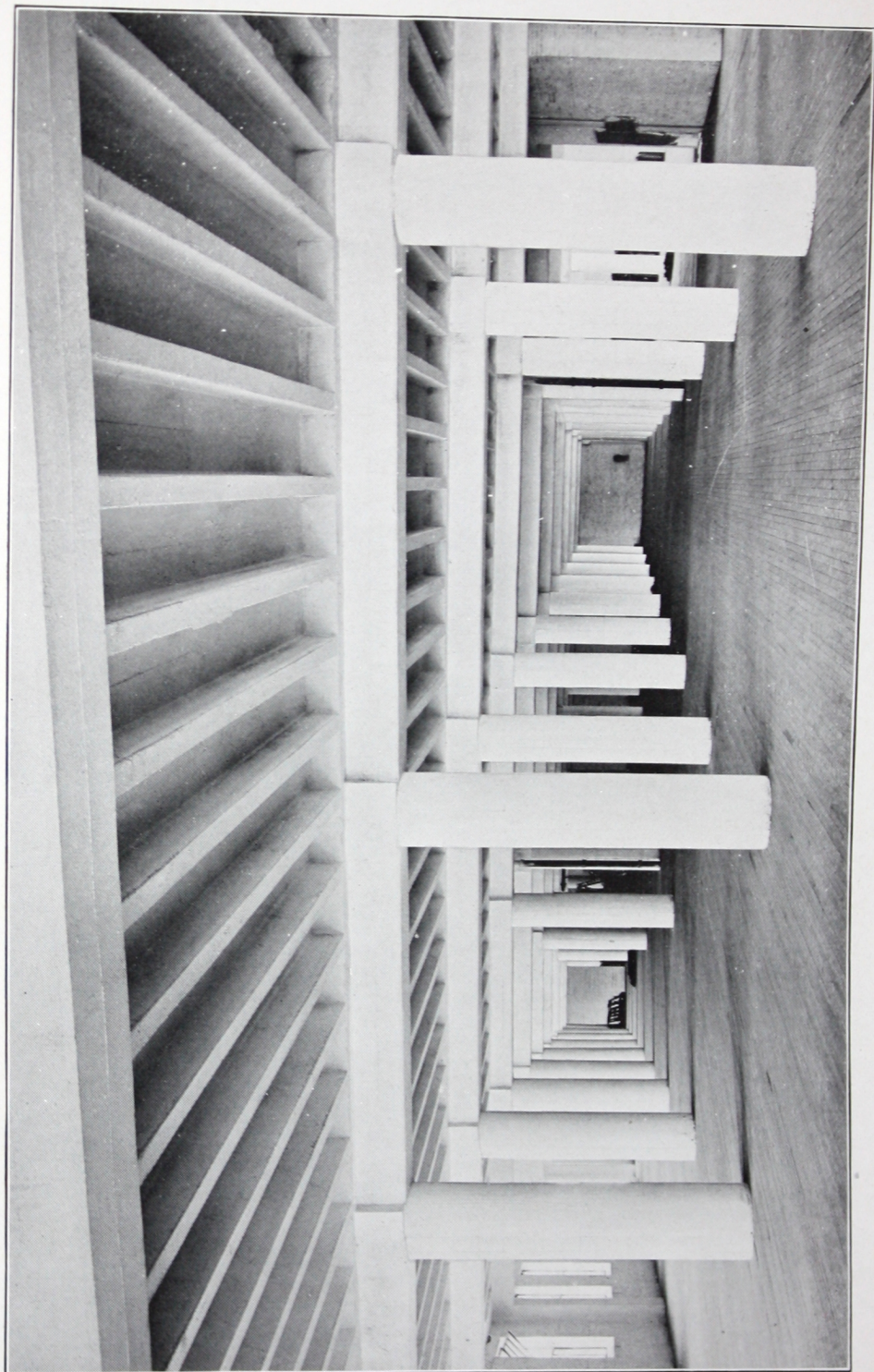
Blaw Circular Column Molds are simple, strong and easily handled, as will be evident upon considering their construction.

A glance at the illustration on page 16 reveals the construction of the Blaw Mold for column shanks. It is made up of several flexible sheet metal panels, flanged, with



*CIRCULAR COLUMN MOLD  
Panels assembled for 32" Column  
showing bands and wedges inserted in  
top section but omitted in splice and  
bottom section showing how splice is  
made*

rigid sectional bands passing through the flanges and secured by wedges. The diagram on this page further illustrates the construction and the method of adjustment.



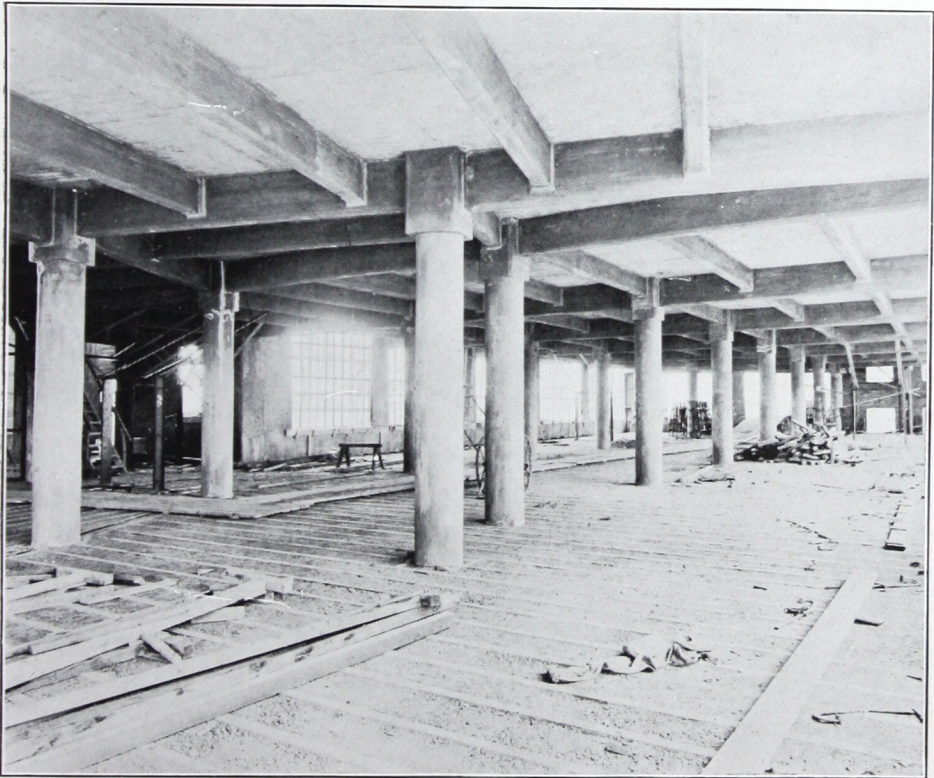
Interior of McCormick Plant, International Harvester Company, Chicago, Ill. Constructed by the Owner. Blaw Steel Forms used.

### **Framing to Girders and Beams.**

There are two methods of handling the connection between columns and floor system, where the latter is of beam and girder construction. The cheaper is to terminate the circular section at or below the bottom of the girder, as shown in the illustrations on pages 6 and 7, in which case all forms above the girder bottom are treated as a part of the floor system, and made to be used without alteration on floor above floor, regardless of the column diameter.

The other method is to extend the circular column shank to the bottom of the floor slab, as shown in the illustration on page 4. This requires lengthening the beam molds and girder molds on each floor where column diameters are reduced, and the use of metal collars cut to fit on the job, to connect the column shank molds to the ends of beam molds and girder molds.

In either case, beam molds and girder molds must be erected before column molds and supported independently of them.



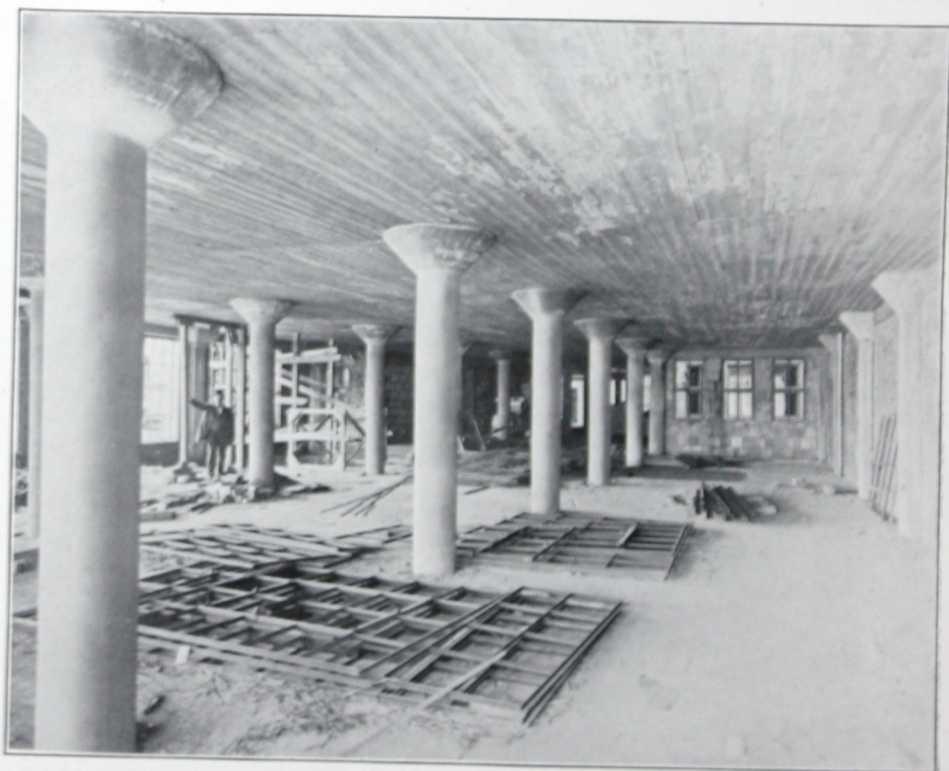
Interior Columns in building for National Casket Company, Long Island City, New York. Fred T. Ley Company, Inc., Builders.  
Blaw Steel Column Molds used.

## Points of Superiority which make Blaw Adjustable Column Molds the choice of Prominent and Successful Contractors.

**Rigidity**—The mold, when assembled, is absolutely stiff and rigid.

**Adjustability**—Blaw Column Molds are adjustable as to height and diameter, therefore a small equipment can be used on a wide range of work.

**Accuracy**—The bands being very rigid, the section is perfectly uniform throughout.



Columns in McGuire Building, Roanoke, Virginia.  
J. F. Barbour & Sons, Roanoke, Virginia, Builders.  
Blaw Steel Column Molds used.

**Strength**—On account of the fastening of the bands being absolutely secure, the mold cannot burst or become unclamped in use. No mold of this type has ever failed on any kind of work.

**Tightness**—The mold is absolutely water-tight, except for a slight negligible leakage at the vertical joints.

**Smoothness**—The mold presents a smooth, hard surface to the concrete, which minimizes surfacing and refinishing.

**Lightness**—Because of its lightness, the mold is easily handled and cheaply transported. The panels nest during shipment, and take up very little room when not in use.

**Simplicity**—Blaw Column Molds cannot be assembled improperly. No skilled labor is required to erect or remove them.

**Completeness**—The forms, when received, are complete, ready for use. No cutting or fitting or punching of holes on the job is required.



Columns in Building of Omaha Cold Storage Company, Omaha, Nebraska.  
John H. Harte, Omaha, Nebraska, Contractor.  
Blaw Steel Column Molds used.

**Interchangeability**—All parts are standard and interchangeable. No time need be wasted keeping molds together in sets.

**Adaptability**—The forms may be assembled on a floor and erected as units, or built up in place around the reinforcing steel after the latter is in place. They are adapted to any method of concrete construction now in use.

**Cheapness**—Blaw Column Molds are leased on very reasonable terms. The savings in time and labor more than reimburse you for the nominal price we place upon them. These savings make their use a decided economy.

**Rapidity**—Blaw Column Molds can be handled very rapidly, because of the small amount of labor required to operate them.

**Require Little Oil**—No oil is absorbed, consequently very little is required.



Interior Circular Columns in Building constructed by Reaugh Construction Co., Cleveland, O., Blaw Steel Column Molds used.

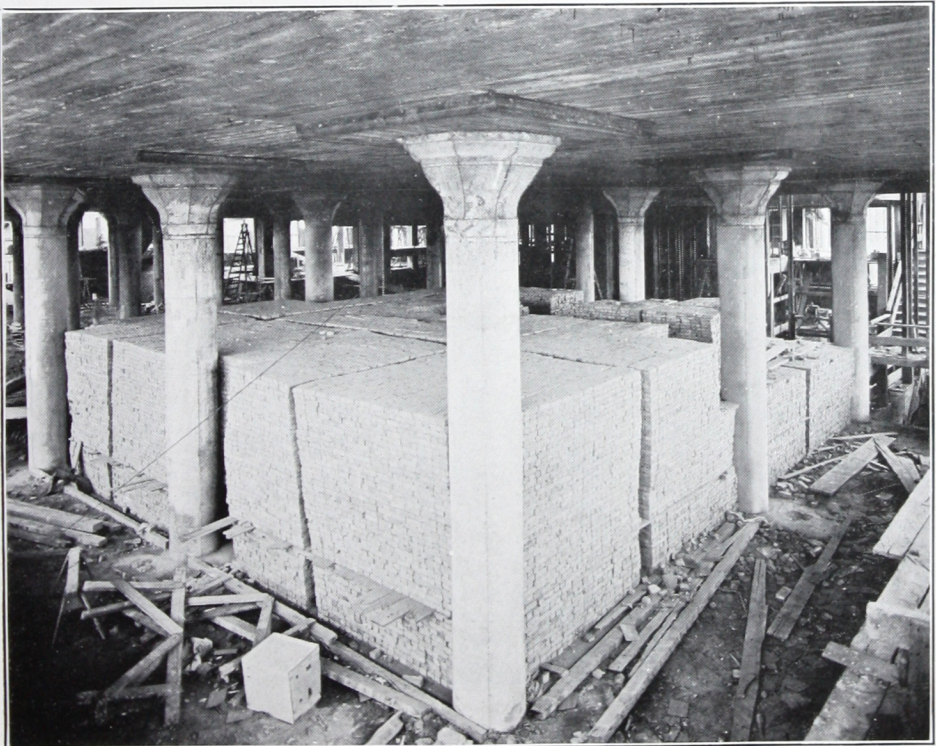
### **Labor of Erection of Circular Column Molds.**

In Cleveland, on the Kinney & Levan Building, shown on page 15, one man and a helper put together 18 column shank molds in one day.

In Chicago, on the building for the International Harvester Company, shown on page 6, two men, without any previous experience, set up 31 molds, 32 inches in diameter, in their first two days of work.

### **Adjustability of Circular Column Molds.**

We furnish these molds adjustable to permit change of diameter at intervals of four inches, three inches, two inches, or one inch, so that we can take care of any desired diameter of column: but we recommend that columns be designed always multiples of two inches in diameter, as the lease price per mold is higher, the greater the number of sizes there are to be cared for on a given job.



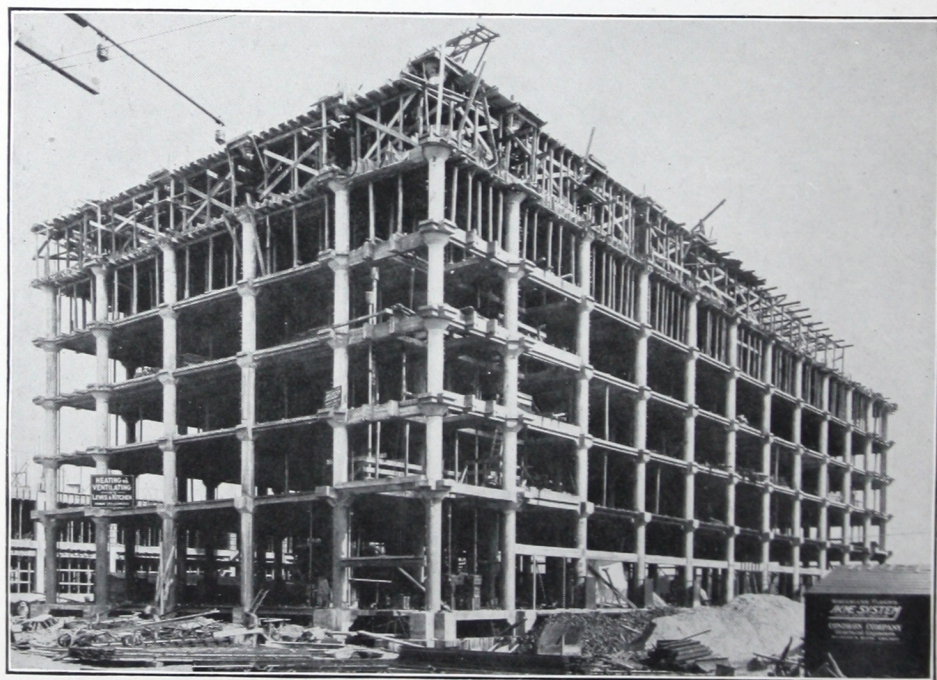
Interior Circular Columns with Octagonal Heads in  
Schultze Baking Company building, Chicago,  
McLennan Construction Company, Chicago, Contractors.  
Blaw Steel Column Molds used.

# Blaw Column Head Molds.

**O**N page 13 are shown diagrams of the profiles of our standard types of column heads made with head molds. The conical column head mold consists of a top section, of suitable diameter to fit to the floor slab, and a series of bottom sections to fit the various diameters of columns. A different bottom section is used for each diameter of column.

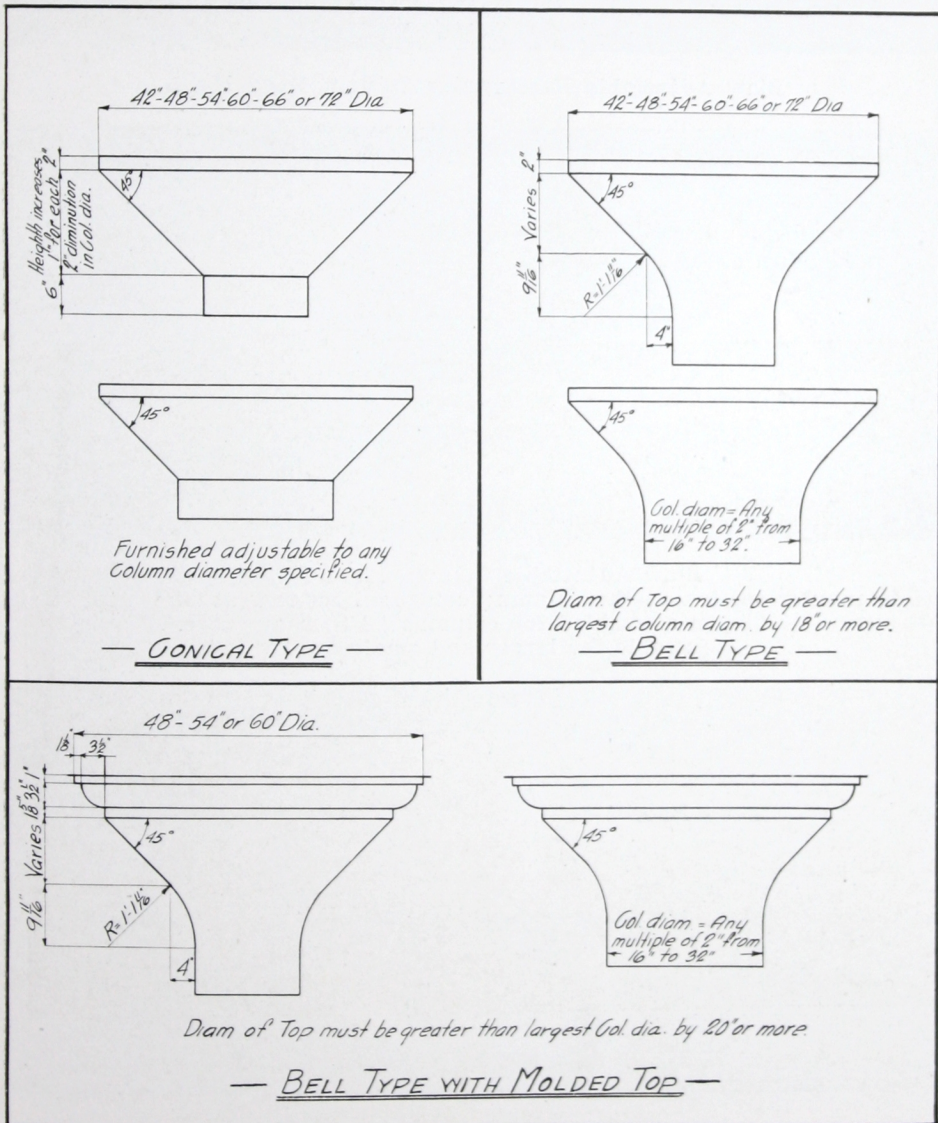
The bell shaped head mold consists of a top section similar to that used in the conical head to which are bolted a number of pressed steel panels, like petals in a flower, which may be so connected together as to fit columns of desired diameters, the same set of panels being used for several diameters of columns.

The bell shaped head is provided with a molded top, instead of a plain conical top, where this is considered desirable.

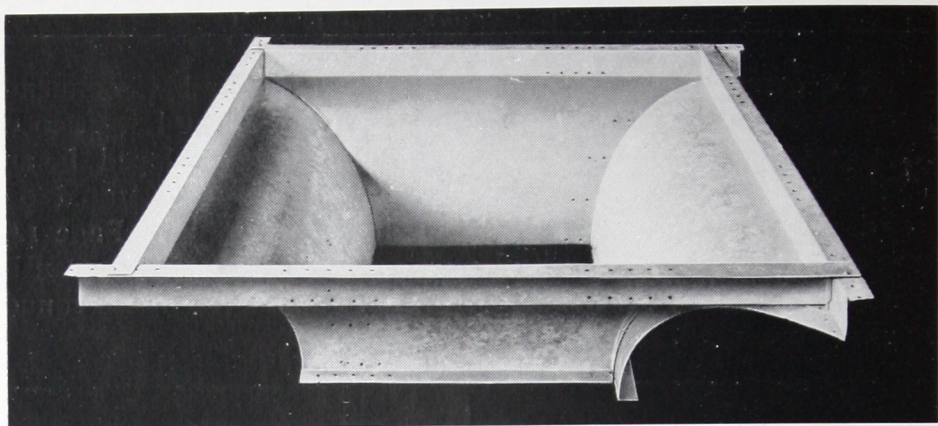


Sears-Roebuck Building, Kansas City,  
Swenson Construction Co., Contrs.; George C. Nimmons,, Chicago, Architect.  
Blaw Adjustable Column Molds and Heads Used  
on Exterior and Interior Columns.

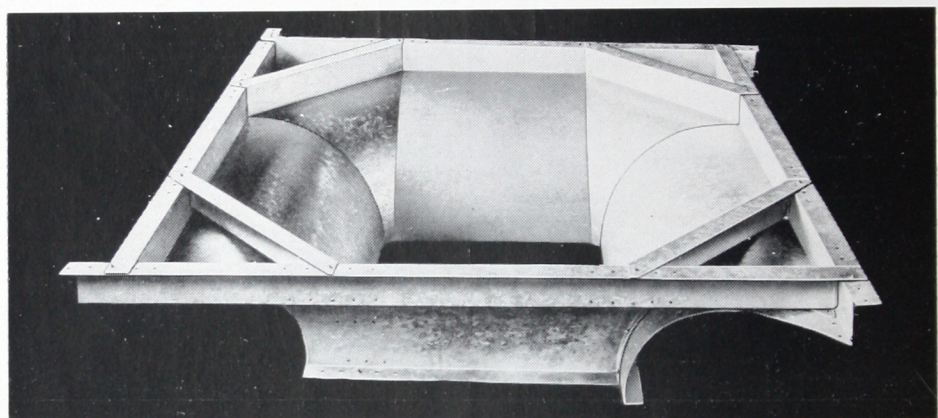
We carry these standard heads in stock, and recommend them wherever the best construction is desired at the lowest cost. Among other column heads which we have developed is an adjustable octagonal type, used in the building illustrated on frontispiece, and many others. This head is shown on Page 14. It is adaptable to either circular or octagonal columns, a transition ring being furnished for each column diameter where round columns are used.



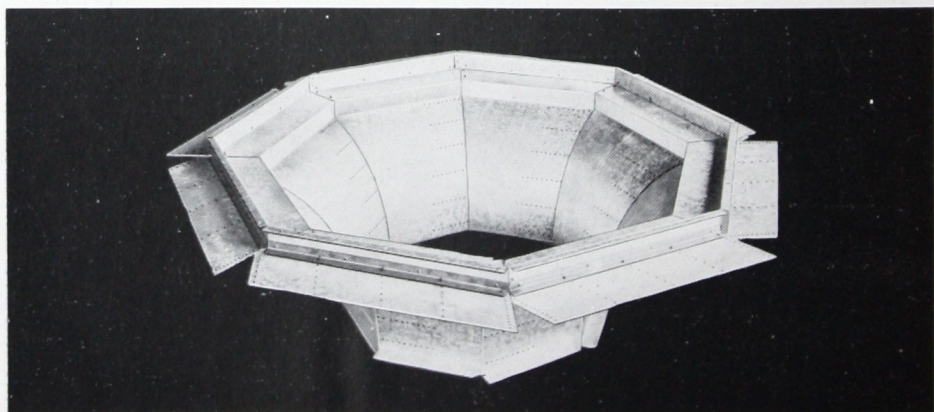
Standard Dimensions of Blaw Adjustable Column Head Molds.



Blaw Adjustable Rectangular Column Head Mold.



Blaw Adjustable Column Head Molds.  
(Rectangular section at the column; octagonal section at the floor slab.  
Shown assembled for columns 28 inches square.  
Adjustable for larger and smaller sections.)



Blaw Adjustable Octagonal Head Mold.  
(In this case 6 feet in diameter across top, adjusted to 36 inches diameter  
at column. The same head may be adjusted for  
smaller columns.)

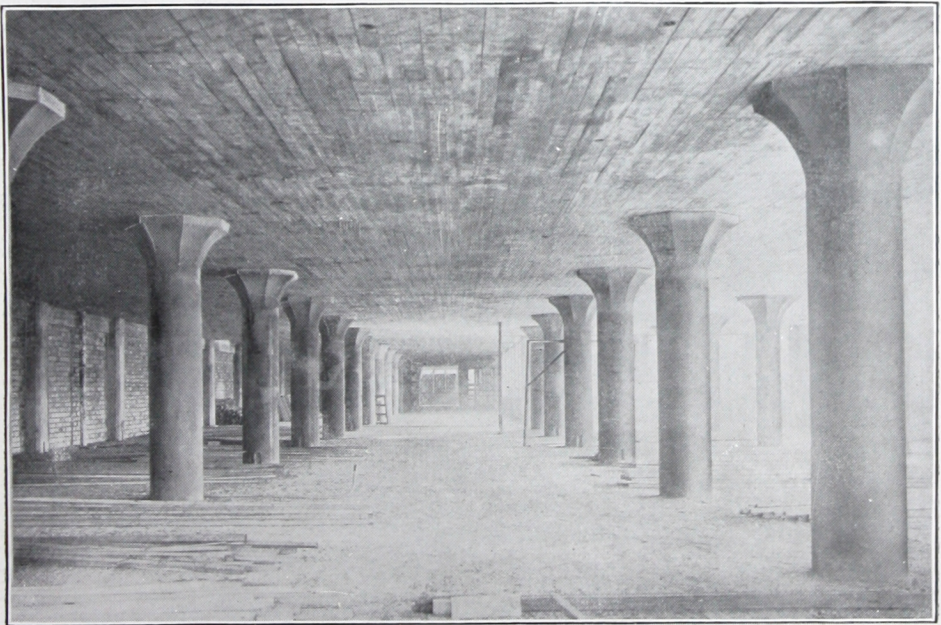
There are exceptional conditions where architects desire some distinctive column head design, different from ordinary standards. We are always glad to collaborate in designing such heads, using our knowledge as to what is practicable in adjustment, while carrying out the general idea of the architect. Such special heads, however, cost more than standard ones, as they require special dies for their manufacture.

### **Special Advantages of Blaw Column Head Molds.**

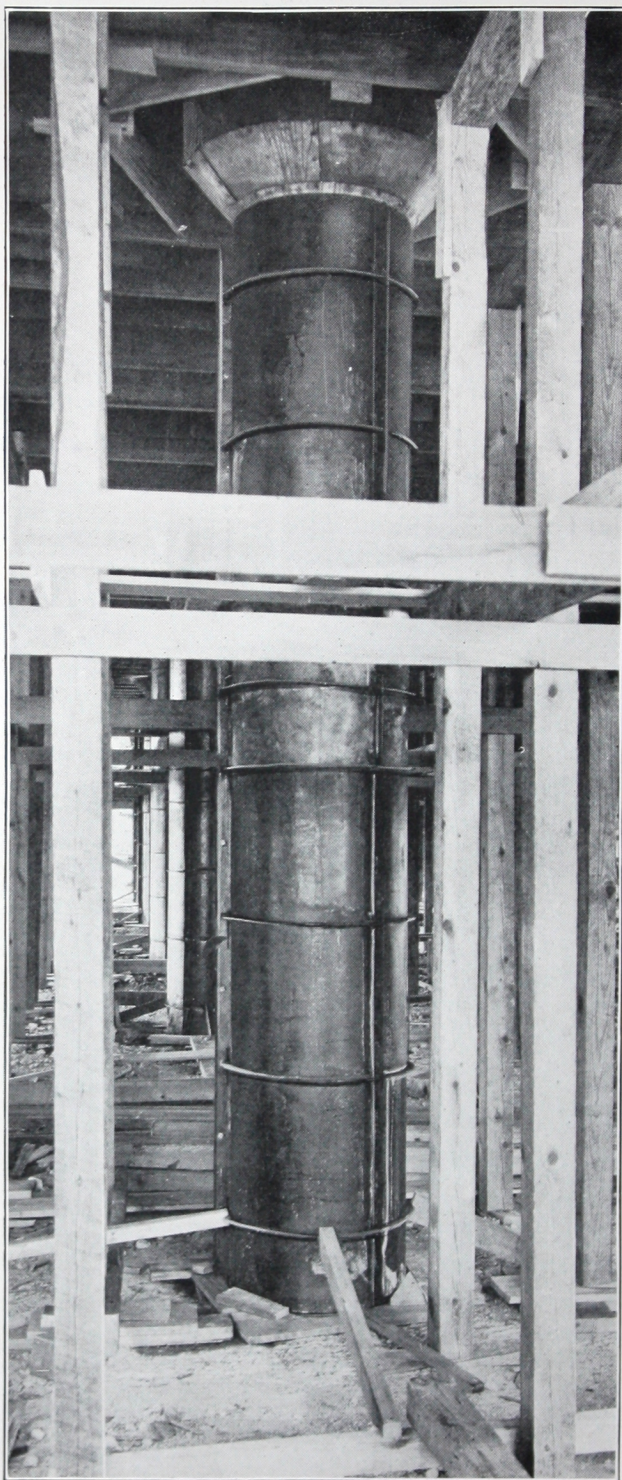
The special advantages of our standard head molds over others may be summed up as follows:

**Top Diameter Constant**—The top diameter of each mold is constant, so that it fully meets structural requirements, and readily frames into the same sized opening wherever used, throughout the building.

**Surface Smooth**—The surfaces are smooth and the figure practically perfect, whatever the diameter of column for which the mold may be adjusted.



Columns constructed in Blaw Steel Column Molds in building for Kinney & Levan, Cleveland, O. Crowell-Lundoff-Little Co., Cleveland, O., Contractors.

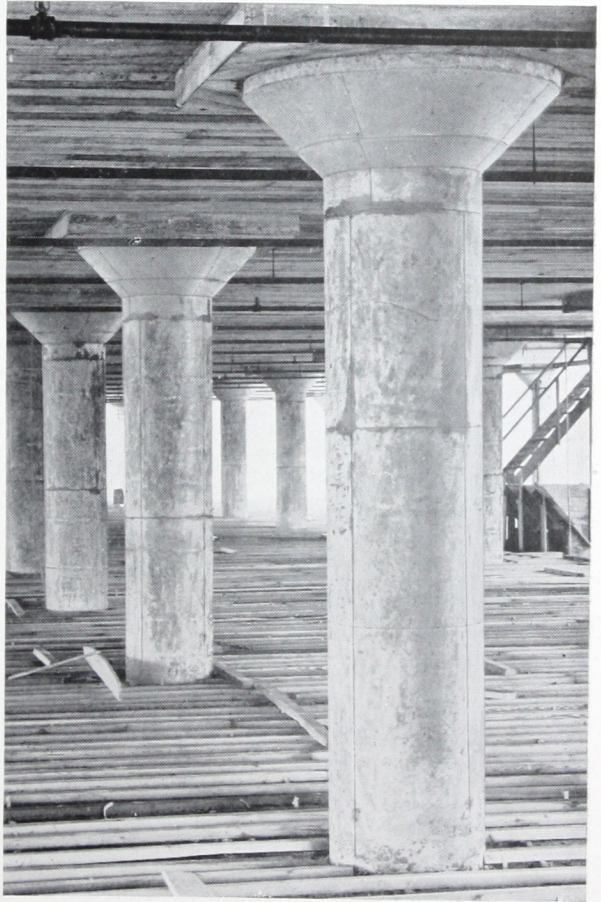
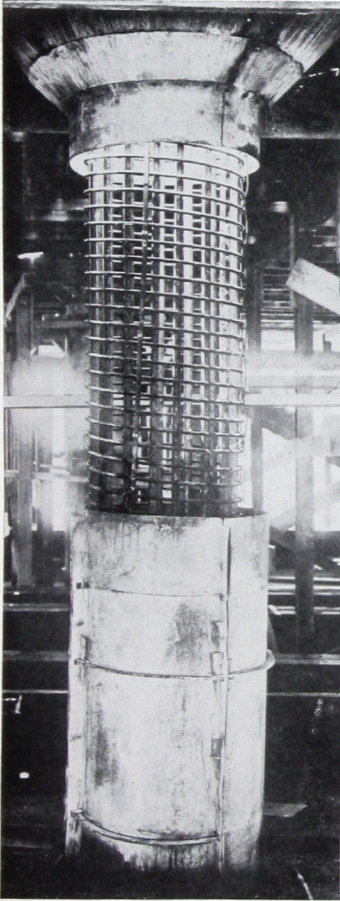


Blaw Steel Column Mold for Circular Column.  
Ready to receive concrete.

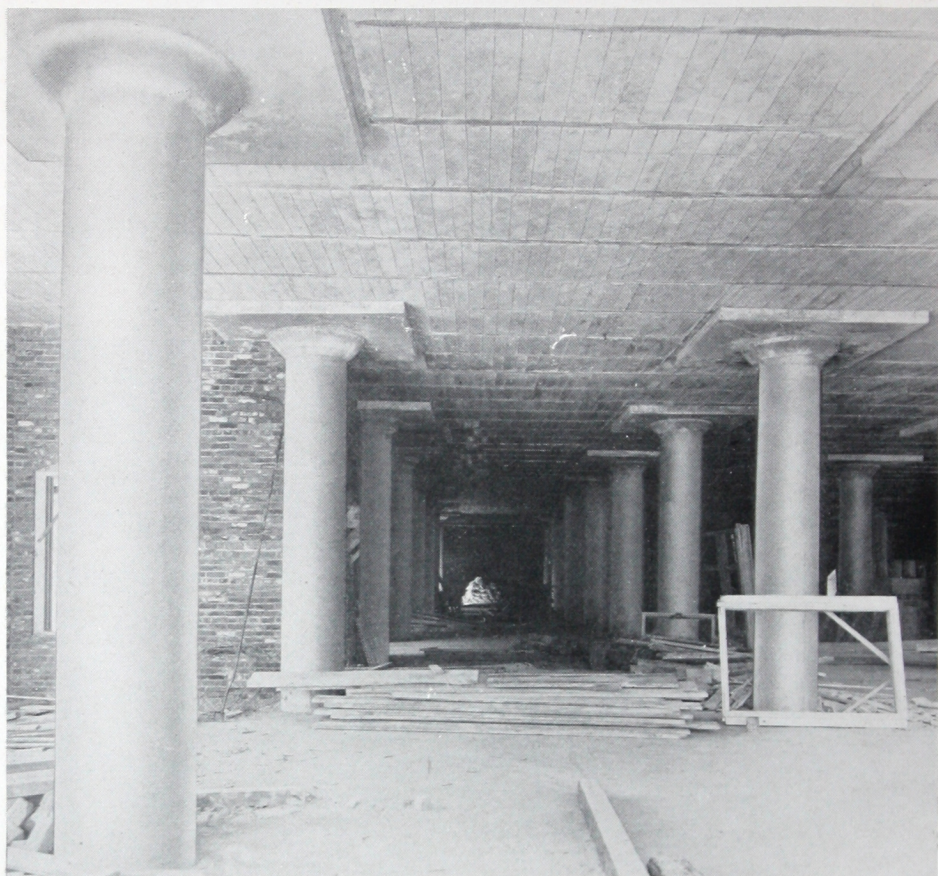
**No Cutting or Punching of Holes**—No cutting or punching of holes for bolts is required during erection. All adjustments are provided for when the mold is first manufactured.

**Fewer Bolts Required**—Fewer bolts are required to connect the parts together, or to adjust to a different sized column than are required for other head molds.

**Adjustability**—Each mold is adjustable to take care of a wider range of column diameter than can be cared for with molds of other designs.



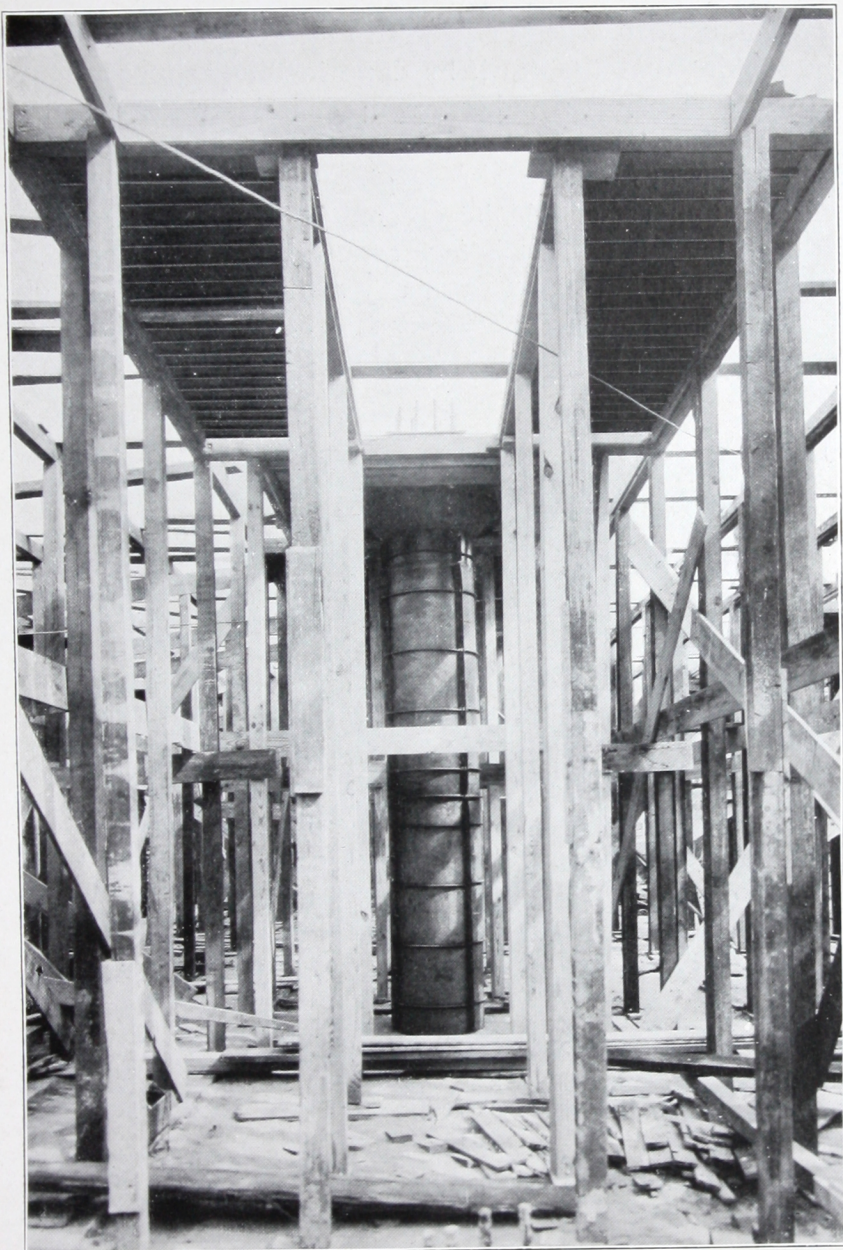
Circular Columns in Sears Roebuck Building, Kansas City—Swenson Construction Co., Kansas City, Mo., Contractors, George C. Nimmons, Chicago, Architect. Illustration on left shows Column Head Mold erected; top section of column mold ready to raise. Illustration on right shows columns after removal of molds.



Interior of building for Henry Dart & Sons, on which Blaw Lap Sheathing and Blaw Column Molds were used.

## Blaw Sheathing.

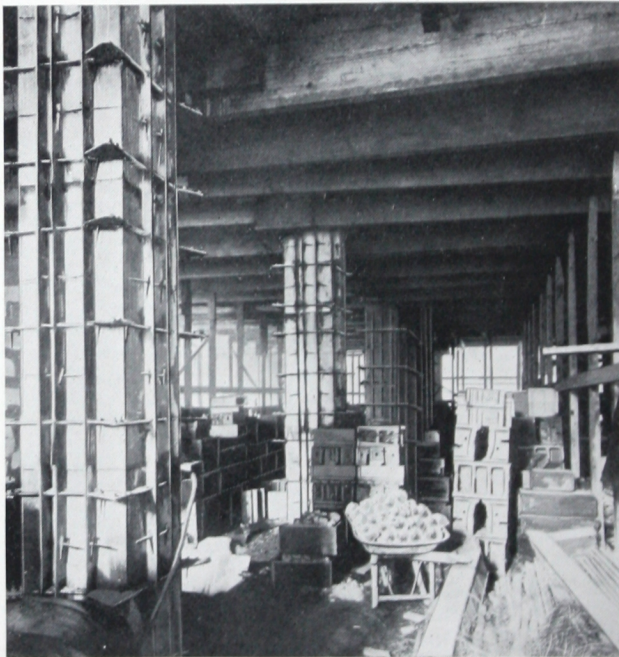
Our column molds of all types are easily used in connection with wooden forms for any of the various types of floor systems. We have developed a type of floor form, known as Blaw Sheathing, which likewise may be applied to very great advantage to any type of floor. The cut on this page shows the appearance of a flat slab ceiling on which this Sheathing was used to the complete satisfaction of all concerned. This sheathing is fully described in our Bulletin No. 63.



Blaw Lap Sheathing and Blaw Circular Column Mold in course of erection by Collins Bros., Rock Island, Ill., on a building for Henry Dart & Sons.

## Blaw Rectangular Column Molds.

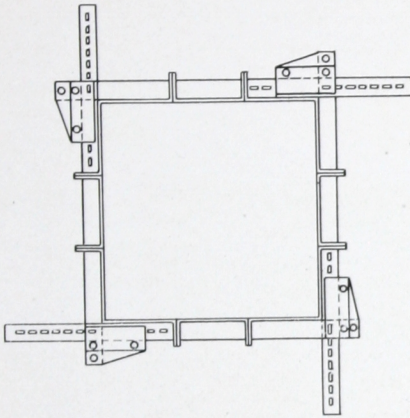
**M**ETAL molds for rectangular columns are cheaper to handle than wooden molds for the same work, but they require that the work be done in different order. When wooden column molds are used, it is customary to erect them first, and to rest the girder molds upon them. If metal column molds are to be used, the girder molds, beam molds, and floor slab supports should be erected before the column molds, and the latter put up just before concrete is to be poured. The metal column molds do not carry any of the weight of the girders or of the floors; consequently, they may be removed the day after concrete is poured without danger to the floor system, which



Rectangular Column Molds in Use by R. & S. Sollitt Co.  
of Chicago, Ill. on Fort Dearborn Hotel Building.

must be supported for a much longer period. If metal molds are to be used for the columns, they will extend only to the bottom of girders. The framing plan for the floor system must be made with this fact in mind.

Blaw rectangular column molds are handled in much the same way as the circular column molds. The cut on page 21 shows how the parts are assembled. Each section of mold consists of four corner panels and an assortment of side panels sufficient to make up the necessary column sizes. There are also bands, or clamps, each band being made of four bars shaped somewhat like a carpenter's square. These bars are slipped through slots in the flanges of the panels, and locked together by one key at each corner, thus forming a rigid rectangle enclosing

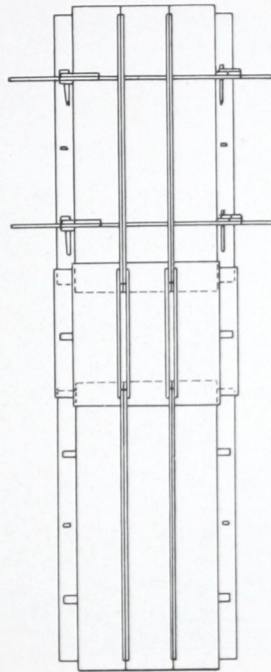


CROSS SECTION

*Showing how bands or clamps are applied*



CORNER PANELS



ELEVATION OF COLUMN

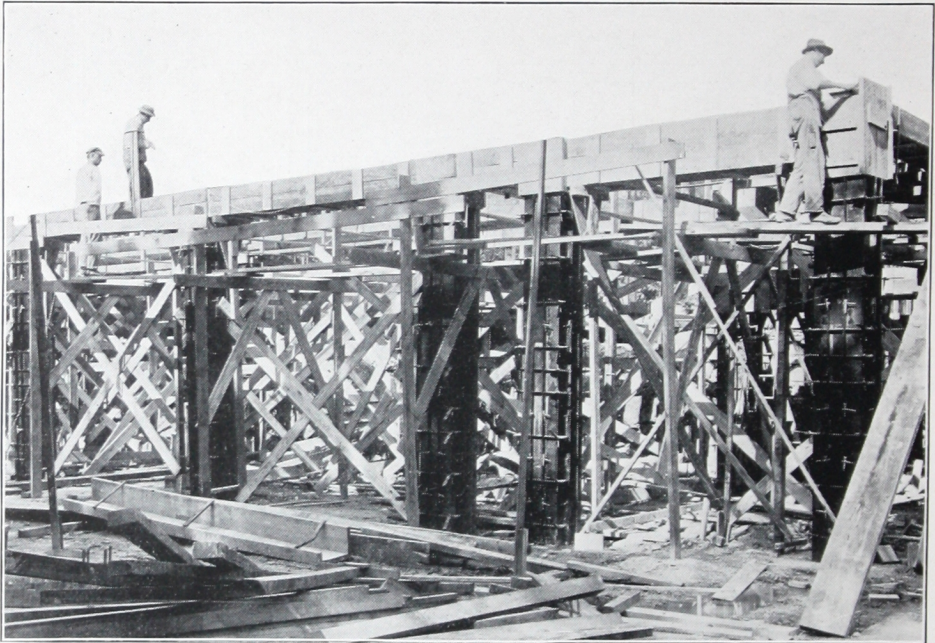
*Panels assembled for 18" square column showing bands and wedges inserted in top section but omitted in bottom section and splice section showing how splice is made*

the panels. Corner panels are either plane or chamfered, as ordered. The molds are telescopically adjustable to care for all the column heights required.

Owing to the ease with which these molds may be adjusted to various column heights, without waste, they are especially economical to use for fireproofing structural steel columns in tall buildings, as well as for constructing reinforced concrete columns.

We furnish adjustable column head molds for rectangular columns, for both interior and wall columns. For buildings of flat slab construction with interior columns of circular section and exterior columns of rectangular section, we can furnish heads for both types of columns with the same profile.

For use on buildings of flat slab construction where structural steel columns are employed, we will furnish adjustable heads of rectangular section at the column and octagonal section at the slab, as shown in the illustration on page 14.



Blaw Rectangular Column Molds in Muncie High School Building,  
Muncie, Indiana.  
George A. Davis Construction Co., Contractors, South Bend, Indiana.

**Blaw Service**—Our experience in designing and manufacturing cost reducing steel forms on over 10,000 contracts, we place at your disposal. You can profitably make use of the information we have acquired in our dealings with hundreds of contractors on hundred of jobs similar to yours.

Our Engineering Department will gladly submit designs and estimates on any work which you may have under consideration. You'll find our proposition to be one that not only adds to the quality of our work, but at the same time materially reduces your construction costs.

# The Blaw System a Time and Money Saver

The most convincing evidence of the success of Blaw Steel Forms is shown by the selection of Blawforms for use in building the Panama Canal, the Catskill Aqueduct, the New York Subway System, the Winnipeg Aqueduct, a number of important Government contracts, and hundreds of building, sewer, wall, paving and bridge contracts.

Blawforms are designed and built for every type of Concrete Construction. Whether you build Sewers, Aqueducts, Drains, Subways, Tunnels, Shafts, Viaducts, Bridges, Piers, Caissons, Locks, Dams, Manholes, Retaining Walls, Reservoirs, Houses, Warehouses, Factories, Foundations, Floors, Walls, Columns, Beams, Girders, Tanks, Grain Bins, Sidewalks, Curbs and Gutters, Integral Curb and Road Construction, Blawforms will save money for you.

In the list of publications shown below, you get an idea of the varied uses to which Blawforms can be put. Copies of any of these publications will be gladly sent on request.

## Blaw Publications.

- Catalog 8**—Concrete Sewer Construction.
- Catalog 10**—Steel Centering for Concrete Construction.
- Catalog 12**—Steel Forms for General Concrete Construction.
- Catalog 14**—Blawforms.—General Catalogue.
- Bulletin 35**—Half Round Steel Centers on Circular Conduits.
- Bulletin 36**—Full Round Steel Centers for Monolithic Construction.
- Bulletin 37**—Indianapolis Sewerage System and the Blaw System.
- Bulletin 38**—Box Centers for Concrete Culvert Construction.
- Bulletin 39**—Steel Centers on Large Sewerage Construction.
- Bulletin 40**—Baltimore Sewerage System and the Blaw System.
- Bulletin 41**—Shaft Lining and Tunnel Centering.
- Bulletin 42**—The Louisville Sewerage System and the Blaw System.
- Bulletin 43**—Cut and Cover Construction on Catskill Aqueduct.—Reprint from Eng. Record.
- Bulletin 44**—Steel and Concrete.—Reprint from Iron Age.
- Bulletin 45**—Blaw Special Steel Culvert Mold.
- Bulletin 46**—Concrete Culvert Construction for Roads and Railroads.
- Book 150 Pages**—"The Water Supply of New York City." (Price, 50 cents.)
- Bulletin 47**—Steel Forms for Sidewalk, Curb, and Curb and Gutter Construction.
- Bulletin 48**—Steel Forms for Concrete Wall Construction.
- Bulletin 49**—Subway Construction.
- Bulletin 50**—Adjustable Steel Forms for Walls, Columns, Girders, Beams and Floors.
- Bulletin 51**—Collapsible Steel Forms for Concrete Fireproofing of Steel Frame Buildings.
- Bulletin 52**—Blaw Silo and Tank Forms.
- Bulletin 53**—Concrete House Construction and the Blaw System.
- Bulletin 54**—Concrete Conduit Construction.
- Bulletin 55**—Blaw Arch Ribs for Bridges, etc.
- Bulletin 56**—Blaw Steel Wall Forms.
- Bulletin 57**—Instructions for using Blaw Steel Wall Forms.
- Book**—Plans for Concrete Houses.
- Bulletin 58**—Steel Forms for Tunnel and Shaft Construction.
- Bulletin 59**—Blaw Column Molds and Heads.
- Bulletin 60**—Blaw Steel Forms for Light Retaining Wall Construction. (Reprint from Concrete-Cement Age.)
- Bulletin 61**—Instructions for Using Blaw Light Wall Forms.
- Bulletin 62**—Time and Cost Saving with Movable Forms. (Reprint from Eng. Record.)
- Bulletin 63**—Blaw Steel Forms for Concrete Floors.
- Bulletin 64**—Blaw Steel Forms for Manholes and Cisterns.
- Bulletin 65**—Blawforms for Concrete Sidewalk, Curb, Curb and Gutter, Road and Similar Construction.
- Bulletin 66**—Blaw Light Wall Forms.
- Bulletin 67**—Blaw Adjustable Column Molds and Heads.

## A Word With Reference to Blaw Patents.

Blawforms in all their various types are covered by a large number of patents, issued and pending. For the past ten years our large corps of Engineers and Experts have specialized on this work to the extent that the Blaw Company are now known throughout the civilized world as the Form Experts in all classes of Concrete work.

In the development of these patents we have spent considerable sums, and we are prepared, in self-protection, to prosecute vigorously any and all attempted infringements.

